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ABSTRACT

A semiconductor device may include a channel region formed between a source and a drain region. One or more first pockets may be formed in the channel region adjacent to junctions. The first pockets may be doped with a dopant of the first conductivity type. At least one second pocket may be formed adjacent to each of the junctions and stacked against each of the first pockets. The second pocket may be doped with a dopant of a second conductivity type such that the dopant concentration in the second pocket is less than the dopant concentration in the first pockets. The second pocket may reduce a local substrate concentration without changing the conductivity type of the channel region.